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THE GAME OF SHINTY.

[Game of Shinty.]

IN the Highlands of Scotland it is customary for persons to amuse themselves, in the winter season, with a game which they call "shinty." This sport has a considerable resemblance to that which is denominated "hurling" in England, and which Strutt describes under that name. The shinty is played with a small hard ball, which is generally made of wood, and each player is furnished with a curved stick somewhat resembling that which is used by golf players. The object of each party of players is to send the ball beyond a given boundary on either side; and the skill of the game consists in striking the ball to the greatest distance towards the adversaries' boundary, or in manœuvring to keep it in advance of the opposing side. Large parties assemble during the Christmas holidays, one parish sometimes making a match against another. In the struggles between the contending players many hard blows are given, and frequently a shin is broken, or by a rarer chance some more serious accident may occur. The writer witnessed a match, in which one of the players, having gained possession of the ball, contrived to run a mile with it in his hand, pursued by both his own and the adverse party until he reached the appointed limit, when his victory was admitted. Many of the Highland farmers join with eagerness in the sport, and the laird frequently encourages by his presence this amusement of his labourers and tenants.

MINERAL KINGDOM.—SECTION XXX.

TIN.

THE appearance of this metal is familiar to every one from its extensive use for domestic purposes. When in a pure state, and recently melted, it has a bright shining surface, like silver, which, however, soon becomes tarnished by exposure to the air. Its specific gravity is nearly eight times that of an equal bulk of water, so that it is a little lighter than iron. It has very little tenacity, and cannot be drawn out into wire; but it is very malleable, being capable of being beaten out into leaves thinner than writing-paper. It is the most fusible of all the metals, except mercury, and melts at a very low heat, viz., 442°, which is little more than twice the heat of boiling water. None of the metals used extensively in common life are so sparingly disseminated over the globe, and the chief supply of it is nearly confined to two places, viz., Great Britain and the Indian Archipelago.

Tin is never found *native*, that is, in the pure state; and there is only one species of ore, if we except one variety which is known only as a rare specimen in the cabinets of mineralogists. The ore from which we obtain the metal is an oxide, containing 75½ parts of

tin, and 21¼ parts of oxygen, in 100 parts of the ore. It is very frequently found in beautiful crystals, which are sometimes transparent, but generally of a dark-brown colour, with a brilliant shining surface. It is one of the oldest of the metals, as regards its geological position; for it is found in the primary rocks, and, indeed, has never been met with in any of later age. It traverses granite and primary slate in slender veins, and these veins are among the oldest which have been formed in the crust of the globe; for they are often crossed, but never themselves cross other veins. In Cornwall these veins are found in the granite and slate, and in the porphyry or elvan; and the ore is also found in layers interposed between, and parallel to, the strata of slate, in which last case it is said to occur in *floors*. These layers, however, are not continuous over a large extent, but are insulated, and within narrow limits. They are evidently formed, in many cases, by the union of several small veins; but sometimes tin-floors occur together, lying one above the other, and parallel to the strata in which they are, as it were, interstratified, as if they had been contemporaneous deposits with the slate. This, however, may be a deceptive appearance; for there are other instances of substances seemingly in regular alternations of strata with sedimentary deposits, which more extended observation proved to have originated from subsequent injections from below, between layers of pre-existing rocks. Tin-floors are also found in the granite and elvan; and these are not rocks which have originated from deposition at the surface, but are, in the opinion of the most experienced geologists, undoubtedly of igneous origin in the interior of the earth.

There are two systems of tin-veins in Cornwall, both running nearly east and west; but the oldest dip to the north, while the newer, which traverse the former, dip to the south. Their width is various, from a few lines to several feet, and in their length there is the same diversity: some have been traced as much as two miles. The same vein is continually changing its dimensions in point of width. Those which are found in the slate are usually much more productive of metal than those which traverse the granite; and they very commonly are met with at the junction of these two descriptions of rocks, and usually pass from the one into the other without any change taking place in the nature and contents of the vein, although there are not unfrequent exceptions to this. Quartz is the most common substance of the vein, and the ore is disseminated through it; but the vein-stone often consists of other minerals. In most of the veins of Cornwall, tin is found nearer the surface than copper. Besides the veins now found traversing the rocks, another abundant supply of tin in Cornwall is from what are called the "*stream works*." In the lower parts of many valleys there are accumulations of gravel, sand, and other alluvium, and in these vast quantities of rolled pebbles and sand, composed of a very pure tin-ore, are met with. That ore is dug up, and such mines are called "stream-works," because streams of water are employed to wash the gravel and sand, and so separate the ore from the other substances with which it is mixed. One of the most extensive of these is that called "Happy Union," in the valley of Pentuan and parish of St. Austell, where, for many ages, a vast quantity of tin has been obtained. The valley is from 300 to 600 feet wide, and contains an accumulation of gravel, sand, and clay, to the depth of 60 feet, in many places. The gravel consists of fragments of granite, similar to that of the adjoining hills, all considerably rounded by attrition, together with fragments of slate, which have not been much water-worn. The tin-ore lies, for the most part, in the lowest bed of this alluvial deposit, and in the form of coarse sand, and of pebbles of all sizes, up to ten lbs. weight The sand is the most valuable, because the larger pieces have often copper, or iron, or some vein-stone attached to them. No animal remains have been found in the lower part of the deposit, but roots of oak-trees have; and in the upper beds, wood, nuts, leaves, and shells, together with the bones and horns of deer and oxen, are not of unfrequent occurrence: the shells are of identical species with those now living in the adjacent seas. At a depth of twenty feet from the surface, a piece of wood fashioned by art was once met with. Similar alluvial deposits are met with in other parts of Cornwall. It is a very interesting subject of inquiry from what sources these collections of water-worn fragments have originated; that they belong to the rocks of the country is evident, but it is not of sufficient extent to lead us to suppose that the wearing of the fragments has been occasioned by a long transport. It would seem as if the surface of the land had been covered for a time with water in violent agitation, and that it was swept off in a direction from the north to the south; for the greatest number of these stream-works are in the valleys opening to the sea on the south and south-east, and there are few in those valleys of which the lower terminations are to the north and north-west. The occurrence of tin-ore in veins near the surface which at greater depths afford the ores of other metals to the entire exclusion of tin, is at present by no means uncommon; and they appear to have existed even to a greater extent in former times, otherwise fragments of other ores would have been more commonly met with in the stream-works, even although we take into account that tin-ore is much less liable to decomposition than the usual ores of copper and iron in Cornwall are. These tin-veins at the surface must have been torn up along with the other surface rocks, and the fragments abraded and rounded, and afterwards gradually deposited in beds in the lower country. There are deposits of stream tin-ore of different ages, for in none of the lowest have any organic remains been found; but they have been met with in the superior parts, and some of these accumulations are of comparatively recent date, for at Treloy, brooches, rings, and coins of rude workmanship, were found in a bed of tin-ore of small thickness. Thus it is evident that the stream-works cannot be ascribed to the action of one great torrent or deluge, but that water must have swept over the land at repeated and distant intervals of time.

The principal tin-mines of Cornwall are in the south-west part of the county, in the parish of St. Just, where the country consists principally of granite; but there are several productive mines in the slate in other places. In our description of the copper-mines we have mentioned that several are worked under the bed of the sea: there are also some of the tin-mines in similar situations. One was opened actually *in* the sea some years ago. It was called Wherry Mine, and was situated near the shore, a little to the west of Penzance, where a rock of elvan, which had been found to contain slender veins of ore, was uncovered at low water. An adventurous miner set to work, although the rock was covered several feet deep at every tide, so that he could only proceed during a part of the day. Every time the men returned to their work they had to empty out the water in the excavation they had formed; but after they had advanced some way an inclosure, or kind of coffer-dam, like what is used in building the piers of bridges, was constructed, which rose above the high-water level, and, by machinery connected with a steam-engine at 200 yards distance on the shore, the work was proceeded with. The mine produced a considerable quantity of ore for several years, when unfortunately a large vessel, which had drifted from her moorings, struck against the coffer-dam, overturned it, and the whole works were in an instant filled with water. The most important stream

works are in the neighbourhood of St. Austell and St. Just, and the most productive are those of Pentuan above referred to.

The early history of the working of the Cornish tin-mines has occupied the attention of many writers, and in a volume of the Transactions of the Cornwall Geological Society there is an interesting essay on the subject by Mr. Hawkins, from which we have derived several of the following particulars. The earliest notice of tin is in the Book of Numbers, xxxi. 22. The Hebrew word, which, in the Septuagint, or ancient Greek translation, is rendered in that place by *Cassiteros*, and, in the Vulgate, or ancient Latin translation, by *Stannum*, is *Oferet;* but in Ezekiel, xxii. 18, 20, the same words are used to translate the Hebrew *Bedil*. That the *Cassiteros* of the Greeks and the *Stannum* of the Romans were pure tin is doubtful;—it is more probable that they were a mixed metal, but containing tin. Now whence did the Midianites derive their tin? None is known to exist nearer their country than in Spain. The prophet Ezekiel, xxvii. mentions *Bedil* as an article of Phœnician commerce. That people had a colony at Gades in Spain, the modern Cadiz, and may have derived the tin from that country. According to Heeren, Gades must have been founded 1100 years before Christ, and there is reason to believe that the Phœnicians, both through the medium of that colony and directly, had intercourse with Britain about a century after that time, and that they got their tin from thence. Pryce conjectures that the celebrated Tyrian purple dye was produced by tin. Herodotus speaks of the *Cassiterides*, or Tin Islands, but does not say where they were situated: they have usually been considered to mean the Scilly Islands, and adjoining coast of Cornwall, for there are traces of old tin-mines in these islands, which are of the same geological structure as that of the tin district of the main land; and Borlase says that, to those who are on the Scilly Islands, Cornwall appears like an island. This product of Cornwall was a staple article of Phœnician commerce for many centuries, and was conveyed by them to the eastern shores of the Mediterranean, from whence, according to Arrian and Pliny, it was transported as far as India. According to Diodorus, a commercial intercourse subsisted between Cornwall and the southern provinces of the Roman empire. That the Romans worked tin-mines in Cornwall is extremely probable, for there are well-authenticated instances of the discovery of Roman coins in old tin-mines and stream-works; and a block of tin of a singular form, with an inscription in Roman letters upon it, was found in the parish of Veryan. Wooden tools of different kinds, and of antique form, have been found in the stream-works, but no such tools have ever been found in the copper-mines.

With regard to the tin trade of Cornwall in the middle ages, Mr. Hawkins remarks, that there appears to have been at all times a steady demand for it in the markets of the East, from the invariable usage in those countries of tinning the inside of their kitchen utensils, which are made of copper; that a great increase of demand took place in the eighth century, when bells for churches came into general use in western Europe, for they were then cast of a great size. The mines were very productive in the thirteenth century, for Richard Earl of Cornwall at that time possessed immense wealth, which he derived from his mines. Towards the end of the fifteenth century, the introduction of brass guns for field artillery created a new demand; as did the invention of pewter in Italy, where it had come into common use in the early part of the sixteenth century.

In our next Section we shall describe the manner of smelting the ore, and the chief foreign localities from which this metal is obtained.

OLD TRAVELLERS.—BUSBEQUIUS.—No. V.

From Chiansada Busbequius went on to Karali, Hazdengri, and Mazotthoy, crossing, near the latter place, the river Sangar (Sangarius), "which," he says, "runs into the Pontus, or Black Sea, out of Phrygia." From the Sangarius he proceeded by four other places, of no name or importance; and on the ninth day after his departure from Constantinople, and not before, he arrived at the ancient city of Ancyra, called by the Turks Angur, and by us Angora. He says, "I saw nothing remarkable in all these villages we went through, save that sometimes among the Turkish tomb-stones we discovered some pillars, or ancient pieces of curious marble, whereon were many remains of Latin or Greek inscriptions, but so defaced that they could not be read; which disappointment I very much resented; for my great delight was, as soon as I came to my lodging at night, to inquire after old inscriptions, together with Latin and Greek coins, and sometimes for rare kinds of plants."

Further on, he says, he found abundance of old coins all up and down this country, and saw that the Turks were in the habit of defacing them, and using them for weights, and of melting down the copper ones to furnish materials for pots and pans. "There was a brazier in one city," he continues, "who grieved me very much; for, demanding of him whether he had any ancient coins to sell, he answered me that a few days ago he had a room full of them, but had melted them down to make brass kettles, as thinking them of little value, and fit for no other use. When I heard this story, it troubled me much to lose so many choice monuments of antiquity; but I paid him back by telling him, that I would have given him 100 guineas for them; so that my revenge was suited to his injury; for I sent him away as sorrowful for the loss of so great gain, as he did me for losing the coins."

Of Ancyra, or Angora, he says, "It is a city of Galatia, sometime the seat of the Gauls, called by Pliny the Tectosages; nor was it unknown to Strabo, though, perhaps, the present town stands but on part of the old town, called in the canons Anguira. Here we saw a stately superscription, and a sampler of those tables whereon the achievements of the Emperor Augustus were summarily comprehended. I caused as much of it as we could read to be copied * * * * but the lower part of it was so battered with clubs and hatchets that it could not be read at all; which loss cannot be sufficiently lamented by all lovers of learning; and so much the more, because the commons of Asia dedicated the city to Augustus. Here, also, we were witnesses of the dyeing of that cloth made of goats' wool, and how they camlet it, or give it its water colour."

From Angora our old traveller proceeded to the village of Balykhissar, and, two stages from that village, reached the river Halys, which has been rendered famous in story by the defeat of Crœsus, the wealthy king of Lydia, by Cyrus the Persian. After crossing the Halys, which, like the Sangarius, falls into the Black Sea, Busbequius travelled on to Teckè-Thioi, where the Turks had a stately monastery for their monks, or dervishes. These dervishes told him many wonderful stories about a sort of Mahommedan St. George, called Chederles, who rescued a virgin by slaughtering a huge and terrific dragon; and, after doing many other deeds, became immortal (he and his horse) by drinking the water of a certain river which "lies somewhere hid in a great cloud, or mist of darkness, so that it has never been seen since!" Our traveller gives an amusing and what is still a true account of the popular anachronisms, and jumbling of history and character, among the Turks.

"They do say that Chederles was one of the friends

and companions of Alexander the Great. But the truth is, the Turks keep no just account either of times or places, but make a confused hodge-podge of all history. They scruple not to say, '*That Job was master of the horse to Solomon, and that Alexander the Great was general of King Solomon's army!*' "

On the second day after crossing the Halys, and the thirtieth after his departure from Constantinople, Busbequius reached Amasia, the end of his journey. He had travelled very slowly; and the Turks had purposely delayed him several days on the road, in order that he and a Persian ambassador, who was also going to sue for peace, should arrive about the same time at the warlike sultan's head-quarters. A few hours after his arrival at Amasia, he was introduced to the great Solyman, who received him with a sour and frowning countenance. He says—

"The sultan sate upon a low throne, not above a foot from the ground; but it was all covered over with rich tapestry, and with cushions exquisitely wrought. His bow and arrows lay by his side: he himself, as I said, looked sternly upon us; and yet there was a certain majesty, mixed with severity, in his countenance. Each of us, as we entered the room, was led up towards him by some of the bedchamber officers, who held us tight by the arm * * * and afterwards having made as if we kissed his hand, we were led backward to the opposite side of the room; for the Turks count it an unmannerly thing to turn any of their back parts upon their prince. There I had liberty to declare our imperial master's wishes; but they suited not with his lofty imperious spirit; so that he, as disdaining them, said nothing but *Guisel! Guisel!* i. e., 'Well!' 'Well!' and so we were dismissed to our lodgings."

The following sketch, by a contemporary, (which is given by Busbequius a few pages farther on,) of one of the greatest monarchs that was ever girded with the imperial scimitar of the Ottomans, is valuable and curious.

"If you ask me," he says, "what manner of man Solyman then was, I will tell you. He was an ancient man; his countenance and the mien of his body were very majestic, well becoming the dignity he bore: he was frugal and temperate, even from his youth. * * But he was too uxorious and over-indulgent to his wife (the celebrated Roxalana), which made him give way to the foul murder of Mustafa, his own son by another woman; yet that crime was vulgarly imputed to an ascendant she had gained over him by reason of her love-enchantments and love-potions * * * * He is a very strict observer of the Mohammedan religion, and is as desirous to propagate that as to enlarge the bounds of his empire.

"He is now sixty years of age: and, for a man of his years, he enjoys a moderate proportion of health; and yet his countenance doth discover that he carries about with him some hidden disease,—it was thought a gangrene, or ulcer, in the thigh; *yet at solemn audiences of ambassadors, he hath wherewith to paint his cheeks, that he may appear sound and healthy to them.*"

Alas! for ambition and grandeur;—a concealed and loathsome disease and painted cheeks at wrinkled three-score!

OAK-BARK PEELERS.

BARK is the outward covering of plants and trees, one of its functions being to protect the inner structure from the effect of sudden changes of temperature. On this account, the bark of the pine-trees which are found in the most inclement regions of North America is often from a foot to fifteen inches in thickness. Another of its uses is to convey to the roots those juices which are elaborated in the foliage. In a young plant the bark is covered with a smooth thin skin; but the expansion of the wood in a few years causes the bark to assume a rough appearance, the continued growth rending it in a perpendicular direction, as may generally be seen in all aged trees. In the birch-tree, owing to the peculiarity of the bark, stripes of it are continually peeling off, being no longer adapted for their intended purposes.

Corks are formed from the dead bark of the cork-tree, which is taken off at certain seasons of the year, being separated without difficulty from the portions of more recent growth. The vigour of a tree is said to be improved by being barked once every eight or ten years after it is fifteen years old; some which have regularly submitted to this operation living for 150 years.

A description of oak growing in North America produces the Quercitron bark, which forms so important an article as a yellow dye. The medicinal value of the Peruvian bark has been known about two centuries, but it was not until fifty years after its introduction in Europe that its qualities were duly appreciated. The original *cinchona* of Peru, which is of a pale colour, is becoming scarce. When dry it is scarcely odorous, but becomes so when used as an infusion. The two other descriptions are the red bark and the yellow bark. The fruit is less bitter than that of the *cinchona*, but its astringent qualities are greater. The nearer the second approaches the colour of an orange the better is its quality: it is comparatively worthless when it assumes a hue between red and yellow. It is bitter to the taste, but its properties are not astringent.

The bark of a tree always contains a greater proportion of the principle of a plant than any other organ. Oak-bark possesses a chemical property which is used in converting hides into leather. The astringent quality which effects this is called *tannin*. Heath, gall-nuts, birch-tree bark, myrtle leaves, leaves of wild laurel, and willow-bark, have been used as substitutes for oak-bark, and even oak saw-dust. Sir Humphry Davy ascertained the relative value to the tanner of various substances in which *tannin* resides. He showed that 3½ lbs. of oak-bark are equal to 2½ lbs. of galls, to 3 lbs. of sumach, to 7½ lbs. of the bark of the Leicester willow, to 18 lbs. of elm-bark, and to 21 lbs. of common willow-bark. The following table is the result of another series of experiments which Sir H. Davy made. It shows the quantity of *tannin* he obtained from 480 lbs. of the bark of middle-sized trees of the species enumerated, gathered in the spring, when this property exists in the greatest abundance.

	lbs.		lbs.
Oak	29	Lombard Poplar	15
Spanish Chestnut	21	Birch	8
Leicester Willow (large)	33	Hazel	14
Elm	13	Blackthorn	16
Common Willow (large)	11	Coppice Oak	32
Ash	16	Inner rind of Oak-bark	72
Beech	10	Oak cut in Autumn	21
Horse Chestnut	9	Larch cut in Autumn	8
Sycamore	11		

Before being used in tanning, the bark is ground into coarse particles, and a layer is put upon each skin in the tan-pit. Without bark or *tannin* the skins would dissolve into glue, but the astringency which it possesses occasions a process exactly the reverse, and forms the substance called leather. The use of bark in hot-houses is getting out of favour with scientific gardeners.

It would be difficult to form a correct opinion as to the quantity of bark used for tanning in this country in a single year. Our foreign supplies of oak-bark are derived from the Netherlands, Germany, and some of the Mediterranean ports, and amount to about 40,000 tons annually; the duty being 8*d.* per cwt. on that imported from foreign countries, and 1*d.* if coming from British possessions.

The importations of cork amount to about 44,000 lbs., which arrive chiefly from Portugal; the duty is 8*s.* per cwt. Our own cork-cutters are protected from foreign competition by a duty of 7*s.* per lb. on manufactured corks. In 1832 the importation of Peruvian bark amounted to 356,998 lbs.; in 1833 to 253,767 lbs. (duty 1*d.* per lb.); but after retaining 49,525 lbs. for domestic consumption, the remainder was exported to foreign countries.

The plate represents a party of women engaged in peeling the bark from an oak-tree. To the intelligent inhabitant of the country the cutting down of an aged tree is a somewhat painful occurrence. It has probably been the admiration of the neighbourhood for many generations; and the removal of an object which his forefathers as well as himself had regarded with interest and pleasure, harshly severs many of the associations which almost visibly connected the past with the present. The conviction, however, that what has been beautiful in its natural state will be eminently

[Peeling the bark from the Oak.]

useful in its employment by man, at once reconciles the reflecting mind to the circumstance. The oak formed into a stately ship is better than the oak rotting in forests which human art has never felled.

Trees are sometimes left standing until they are so completely undermined by age, that it is a measure of safety to cut them down to prevent their falling on the cattle which resort around them for shelter. For the purpose of obtaining timber for commercial uses, the proper time for felling an oak or any other tree is at the season of its maturity, when it ceases to make any further increase to its diameter. The farmer, then, either cuts the roots at about three feet from the stem, and secures a chopping-block for the butcher, or severs the trunk at the level of the earth, and leaves the root to grow shoots for fuel. The tree being felled, is next divested of its branches, which are sorted into fence-wood, faggots, &c., and the trunk and arms preserved as entire as possible for the builder. But before the trunk is deprived of its larger branches, the whole are stripped of the bark. This operation is performed in the following manner:—a number of women called "barkers" are each furnished with light short-handled mallets made of hard wood, about eight or nine inches long, three inches square at the face, and the other end sharpened like a wedge, in order the more easily to make an incision in the bark, which is done all along the side of the tree which happens to be uppermost, in a straight line; and as two barkers generally work together, it is proper that whilst one is employed in making an incision with the mallet, the other, being furnished with a pointed instrument called the "barking-bill," cuts the bark across the tree in lengths of from two feet six inches to three feet, and then, by forcing a shovel-shaped instrument called a "peeling-iron" between the bark and the wood, easily separates the former, and peels it from the timber in entire pieces. The larger branches are afterwards stripped in a similar manner. This business being chiefly done in the early spring season, the vast trunks are left in the situations in which they first fell till the gathering of the crops in autumn permits their removal. During this time they get blanched to almost perfect whiteness, and in the midst of the summer verdure have a very singular but picturesque appearance.

The bark, when peeled, is carefully dried for two or three weeks, and then piled in stacks of about eight feet square by fifteen feet in height, and sold to the tanner.

NORTH AMERICAN INDIANS.

THE spirit of investigation has hitherto done but little towards laying down any satisfactory data as to the origin of the aborigines of North America. The relics pertaining to them, which are at times discovered, are few and simple, consisting chiefly of hatchets of a rude form, knives of stone, mortars for bruising maize, arrow-heads, and similar articles. But these afford no grounds on which to trace their history. They are the same as had been long in use before the discovery of America, and had undergone no change at the time when the "pilgrim fathers" landed at Plymouth and laid the foundation of a new world. It is true that there are traces of a people who lived at a period antecedent to that of the Indian tribes with which Europeans have become acquainted, but their history is still further lost in mystery. Their *tumuli* are to be found in many parts of North America, and from the age of the trees which have grown over these remains, it is calculated that at least a thousand years must have elapsed since their abandonment; and how long they had previously existed it is impossible even to form a well-grounded conjecture. The tumuli are generally in the neighbourhood of the great rivers, between the shores of Lake Erie and the Gulf of Mexico. It is not an idle speculation to assume that the people by whom they were constructed possessed some knowledge of the useful arts, and consequently were more civilized than the subsequent inhabitants of the country; but some have inferred that the existence of great cities at some remote period is indicated by these remains of antiquity. Nothing else is now left of this race, and no record can inform us of the circumstances which led to their social decline.

It has been computed that not fewer than 2,000,000 of the Indian tribes inhabited the immense territory extending from the Atlantic to the Pacific Ocean when the first English settlements were formed in North America. Above 11,000 existed in the district now comprised in the state of Maine. Some of the tribes were powerful, both by their warlike qualities and their political talents. The Mohawks and four other tribes formed a confederation, whose power extended from the Canadian Lakes to Virginia. The Cherokees not only occupied 36,000,000 of acres as their hunting grounds, but defended the same by their arms. The whole of the vast territory of North America was divided among a variety of tribes all distinguished both as warriors and hunters. There was everything indeed to be found in this quarter which could attract a people to whom the exertion of continued labour was irksome. The woods produced an abundant supply of wild-fruits; the plains brought forth herbs and vegetables; and deer, morse, bears, turkeys, pigeons, quails, and partridges, everywhere abounded. The beaver and a variety of animals furnishing valuable skins were almost as numerous as the game in a modern preserve, and the bays, creeks, rivers, and lakes, furnished plentiful supplies of fish and wild-fowl. Here, where but little exertion was required to supply the few natural wants of life, the native tribes might have increased in numbers and happiness, and, if it were consistent with that stage of society, have contained in reality those attractions which it is vainly supposed to exhibit in contrast to the struggles of a more civilized career. But the condition of the wild hunter, under circumstances as favourable as any under which it could have been placed, contained within itself no progressive principle; and when industry and the application of the useful arts had given the first settlers prosperity, ease, and comforts, the savage tribes, not being drawn within the extending stream of civilization, gradually dwindled in their power and numbers, till it has become a question whether in a few years any traces will remain of their existence. Thatcher, an American writer, remarks:—"The time will come but too soon, we fear, when the history of the Indians will be the history of a people of which no living specimen shall exist upon the earth: too soon will the places that now know them know them never again. Their council-fires will have gone out upon the green hills of the south. Their canoes shall plough no more the bosom of the northern lakes. Even the prairies and mountains of the far west will cease to be their refuge from the rushing march of civilization. Their forests will be felled; their game will disappear: and then,—if indeed no portion of them can be rescued by benevolence from the grave of heathenism,—if no blessed ray of the knowledge of man, or the saving truth of Heaven, shall lighten the gloom of the wilderness,—then will the last Indian stand upon the verge of the Pacific seas, and his sun will have gone down for ever."

To civilized men of all countries the interests of humanity are too dear to permit them to regard the extinction of a race possessing, or which once possessed, a national existence and not a few grand and noble virtues, without strong feelings of sympathy. The nar-

ratives of Hunter and Tanner, the writings of Chateaubriand, Campbell's 'Gertrude of Wyoming,' the novels of Cooper, and other works, have strongly interested men in the fate of the North American Indians, and made us familiar with their skill as hunters, their indomitable courage as warriors, and their simple virtues as men. If the poet and the novelist have been touched with their many claims on their fellow-men, the statesman and the Christian will surely regard their condition with still higher interest.

In the United States' territory the number of Indians existing at present amounts to about 313,000. In Vermont, New Hampshire, and several other States, none are left. In Maine, Massachusetts, Rhode Island Connecticut, and Virginia together, there are less than 2,500. The policy of the United States towards the Indians has been praiseworthy, so far as the central government is concerned. Many years ago, the Cherokees, wishing to remain on the land of their fathers with a view to their national preservation, the government at Washington entered into a treaty with them, by which boundaries were fixed and friendly relations established between the parties. These boundaries were guaranteed by the United States, but five out of the ten millions of acres of which their territory consisted were claimed by the States of Georgia and Carolina, under a protest made at the time, in which they contended that this treaty was an exercise of power not conferred upon the central authority of the country by the articles of confederation. In 1827, Georgia, by an act of her own legislature, asserted her right of taking possession of the Cherokee country by force. She declared that the Indians were tenants at her will,—that she wanted their lands, and would have them. In 1831 and 1832, Georgia extended her jurisdiction over the Cherokee territory, and, by the agency of laws enacted by her separate legislature, prohibited the preachers of the American Board of Missions from residing in the Cherokee district, imprisoned some of the natives, and threatened the whole tribe with banishment. Three of the missionaries were tried by the courts of Georgia for refusing to acknowledge the jurisdiction of that State; and the atrocious sentence was inflicted upon them of confinement for four years in the Georgian Penitentiary.

Efforts were made to avert the fate of a people whose rights as a nation had been recognized by many separate treaties which the United States' government had formed with them. The central government acted as mediator between its federative State and the Cherokees, and offered the latter an extensive territory west of the Arkansas, to be secured to them by patent, and to be for ever beyond the boundaries of any State. To this the Cherokees objected, and the question of their removal was carried in the Senate of the United States by a majority of 7 out of 47 votes, and, in the House of Representatives, by a majority of 5 out of 199 votes.

When the state of Georgia held out its threats of despoiling the Cherokees of their property in the soil, their population was 13,563. In eighteen years ending in 1825, the rate at which the population had increased varied but little from the common rate of increase amongst the whites of the United States. In 1832, the Cherokees amounted to 15,060, including 1200 African slaves. Above 150 white men and 73 white women had intermarried with them, and resided amongst them. Agriculture and many useful arts had made considerable progress. They possessed 80,000 domestic animals, including horses, cattle, sheep, and swine, 3000 ploughs, 2,500 spinning-wheels, 62 blacksmiths' shops; in fact, they had within themselves all the materials for obtaining abundance and prosperity. A well-organized government watched over the interests of the community. The executive was composed of a chief and assistant, with three counsellors, all elected by the legislature, which consisted of a national committee and a national council, the former containing sixteen members, and the latter twenty-four, the members of each body being chosen for two years. All males above eighteen years of age, except those of African origin, possessed the privilege of voting. Each of the two bodies had a negative on the other, and together were styled the "General Council of the Cherokee Nation." The executive counsellors were chosen annually. The courts of judicature consisted of a supreme court, and of circuit and inferior courts. There was also a treasury, but we are not aware in what manner its coffers were filled. The dress of the Cherokees was substantially the same as that of their white neighbours. They raised not only sufficient food to supply their own wants, but many of them had a surplus of corn for sale; and they had ceased to depend upon game as a means of subsistence. Their dwellings were neat and comfortable; the simplest were log-cabins, and seldom without a proper floor, but many consisted of two stories, and some dwellings were of wood, or brick neatly painted, and both commodious and handsome.

Nor was the intellectual and moral state of the Cherokees less cheering than their physical condition. Polygamy was declining among them, and their women were assuming the position for which they were designed. Eighteen schools had been established. At the commencement of 1831, about 200 Cherokees, exclusive of females, had attained an English education, which enabled them to transact or carry on any ordinary business; 500 children were learning English, and a majority of the population, between the period of childhood and middle life, could read their native language. The government possessed a press, at which the Gospel of St. Matthew and a collection of hymns had been printed in Cherokee. A newspaper was also published in the same language. A native named Guess had invented the characters.

This was an important point in the history of the Indians. Their common mode of communication had previously consisted of a system of hieroglyphics inscribed on a piece of bark, or on a large tree with the bark taken off for the purpose. A war-party by this means could at once make known its success, and communicate many minute points connected with their expedition. In like manner a party of hunters would describe a chase.

Charlevoix, an old French writer, remarked that the Indians were so acute that even on the hardest ground they would discover if a person had recently passed, and would distinguish the footsteps of men from those of women, and even of what nation the parties were. An anecdote is related of an Indian hunter who, having discovered that some venison which he had hung up in his hut to dry had been stolen, set off through the woods in pursuit of the thief. He had not proceeded far before he met with some persons of whom he inquired if they had seen a little old white man with a short gun, accompanied by a small dog with a little tail, as a man of that description had stolen his venison? They happened to have seen such a person; and the Indian, on being asked how he could describe a man whom he had never seen, replied, "The thief I know is a *little* man, by his having made a pile of stones to stand upon in order to reach the venison; that he is an *old* man I know by his short steps, which I have traced over the dead leaves in the woods; and that he is a *white* man I know by his turning *out* his toes when he walks, which an Indian never does. His gun I know to be *short*, by the mark the muzzle made in rubbing the bark of the tree on which it leaned; that his dog is *small* I know by his tracks; and that he has a *short tail* I discovered by the mark it made in the dust where he

was sitting at the time his master was taking down the meat."

It is almost astonishing that, as the faculties of observation were so active as is here described, the Indian system of picture-writing or hieroglyphics had not become more perfect and made nearer approaches to the characters which Guess invented. But the truth is, it fulfilled all the objects which were called for in that state of existence. When, however, the necessities of civil life called forth fresh habits and states of feeling, then it failed to supply the symbols which their new condition required. The invention of characters became necessary. Both the invention and the inventor are thus described in the 'Cherokee Phœnix:'—"Mr. Guess is, in appearance and habits, a full Cherokee, though his grandfather, on his father's side, was a white man. He has no knowledge of any language but the Cherokee. He was led to the subject of writing the Cherokee language by the conversation of some young men, who said that the whites could put a talk upon paper, and send it to any distance and it would be understood. In attempting to invent a Cherokee character, he at first could think of no way but that of giving each word a particular sign. He pursued this plan for about a year, and made several thousand characters. He then became convinced that this was not the right mode, and, after trying several other methods, at length conceived the idea of dividing the words into parts. He now soon found that the same characters would apply in different words, so that their number would be comparatively small. After putting down and learning all the syllables that he could think of, he would listen to speeches and the conversation of strangers, and whenever a word occurred which had a part or syllable in it that was not on his list, he would bear it in mind till he made a character for it. In this way he soon discovered all the syllables in the language. In forming his characters he made some use of the English letters, as he found them in a spelling-book in his possession." After commencing the last-mentioned plan, he is said to have completed his system in about a month, having reduced all the sounds in the language to eighty-five characters. Mr. Guess was advanced in life when he entered upon this work.

We have not space in the present Number to show what is the policy of the British Government towards the Indians in our North American possessions; but we shall again recur to the subject, and shall then give some account of their moral condition, and the prospects which there appear to be of their future civilization.

COLLEGE LIFE IN THE UNITED STATES.

THE following graphic sketch of college life in the United States is abridged from an American work*, which has, we believe, been re-published in this country.

I must say a word or two with regard to the ordinary routine of daily life at college. Very early in the morning the observer may see lights at a few of the windows of the buildings inhabited by the students. They mark the rooms occupied by the more industrious or more resolute, who rise and devote an hour or two to their books by lamp-light in the winter mornings. About day, the bell awakens the multitude of sleepers in all the rooms, and in a short time they are to be seen issuing from the various doors with sleepy looks, and with books under their arms, and some adjusting their hurried dress. The first who come down go slowly, others with quicker and quicker step as the tolling of the bell proceeds; and the last few stragglers run with all speed to secure their places before the bell ceases to toll. When the last stroke is sounded, it usually finds one or two too late, who stop suddenly and return slowly to their rooms. While the morning religious service is performed by the president, or one of the professors, the students exhibit the appearance of respectful attention, except that four or five, appointed for the purpose in different parts of the chapel, are looking carefully around to observe what persons are absent. A few, also, conceal under their cloaks, or behind a pillar or partition between the pews, the book which contains their morning lesson; and endeavour to make up, as well as the faint but increasing light will enable them, for the time wasted in idleness or dissipation the evening before. When prayers are over, the several classes repair immediately to the rooms assigned respectively to them, and recite the first lesson of the day. During the short period which elapses between the recitation and the breakfast-bell, college is a busy scene. Fires are kindling in every room. Groups are standing in every corner, or hovering round the newly-made fires;—parties are running up and down the stairs, two steps at a time, with the ardour and activity of youth:—and now and then a fresh crowd is seen issuing from the door of some one of the buildings where a class has finished its recitations, and comes forth to disperse to their rooms followed by their instructor, who walks away to his house in the village. The breakfast-bell brings out the whole throng again, and gathers them around the long tables in the Commons' Hall, or else scatters them among the private families in the neighbourhood.

An hour after breakfast the bell rings to mark the commencement of study hours; when the students are required by the college laws to repair to their respective rooms,—each of which answers the threefold purpose of parlour, bed-room, and study—to prepare for their recitation at eleven o'clock. They, however, who choose to evade this law can do it without much danger of detection. The great majority comply; but some go into their neighbours' rooms to receive assistance in their studies, some lay by the dull text book and read a tale, a play, or game; and others, farther gone in the road of idleness or dissipation, steal secretly from college and ramble in the woods, or skate upon the ice, or find some rendezvous of dissipation in the village, evading their tasks like truant boys. The afternoon is spent like the forenoon, and the last recitation of the winter's day is just before the sun goes down. An hour is allotted to it, and then follow evening prayers, at the close of which the students issue from the chapel and walk in long procession to supper. The remainder of the account describes the manner in which the various students pass their evenings; which of course varies with the dispositions of the students, as the appropriation of this time is regulated by no prescribed rule, although it is assumed that part of it at least will be applied to preparation for the recitations of the ensuing morning. There is nothing peculiar in the occupations of the well disposed; but some of the employments or amusements of those whose minds are least disciplined, cannot but seem strange to us. Some assemble for mirth or dissipation, or prowl round the entries and halls to perpetrate petty mischief, breaking the windows of some hapless Freshman,—or burning nauseous drugs at the keyhole of his door,—or rolling logs down stairs, and running instantly into a neighbouring room so as to escape detection,—or watching at an upper window to pour water unobserved upon some fellow-student passing in or out below,—or plugging up the keyhole of the chapel-door to prevent access to it for morning prayers,—or gaining access to the bell by false keys, and cutting the rope, with a variety of other pranks of a similar description. After becoming tired of this, they assemble in the room of some dissolute companion, and there prepare themselves a supper with food they have plundered from a neighbouring poultry-yard, and utensils obtained in some similar mode. Ardent spirits sometimes make them noisy;—and a college officer, at half-past nine, breaks in upon them, and exposure and punishment are the consequences. Similar dispositions to mischief and dissipation doubtless exist to a large extent in our own colleges, but they are somewhat differently exhibited; and in such cases it is only the *mode* of exhibition which can be called characteristic.

* Abbot's 'Corner Stone.'

*** The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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